

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

PETER GASSNER et al.

Application No.: 10/041,034

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For: CUSTOMIZATION OF CLIENT-
SERVER INTERACTION IN AN
INTERNET APPLICATION

Customer No.: 51206

Confirmation No. 2584

Examiner: Tuan A. Vu

Technology Center/Art Unit: 2193

CLAIM AMENDMENTS FOR
ENABLING EXAMINER'S
AMENDMENT

Dear Examiner Vu:

Please enter the following amendments and remarks:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 16 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-3. (Canceled)

4. (Currently Amended) A system for generating application user interfaces and enabling customization of the user interfaces for each of a plurality of users, the system comprising:

a personalization system including a personalization engine and a user profile interface, both integrated with at least one Internet application and operable with an integrated development environment (IDE) so as to enable a first or second user among the plurality of users to customize an application user interface including one or more user interface elements in conjunction with the at least one Internet application, the IDE comprising graphical features and user interface elements whose properties are defined in metadata which is retrievable via the personalization engine and user profile interface, the user profile interface being delivered to each of a first user display of a first user of the plurality of users and to a second user display of a second user of the plurality of users, the personalization engine being operable to access a page definition including metadata associated with at least one customizable functional property of a user interface element on an application user interface and receive through the user profile interface being operable to allow a request from the first user to modify a first personalization data for the first user and the second user to modify a second personalization data for the second user, the first personalization data characterizing a first functional property of a first user interface element of a first application user interface to be presented on the first user display, the personalization engine being further operable to store information for the modified first functional property as first personalization data for the first user to a data record associated with the first user and identified by the metadata, the personalization engine being further operable to receive a request from the second user to modify and the second personalization data characterizes a second functional property of a second user interface element of a second

application user interface to be presented on the second user display, the personalization engine being further operable to store information for the modified second functional property as second personalization data for the second user to a data record associated with the second user and identified by the metadata, the first user interface element and the second user interface element appearing substantially similar on their respective displays but the first functional property and second functional property are being different;

an Internet application server operable to execute at least one selected Internet application of a plurality of Internet applications, the Internet application server including a user interface generator operable to generate at least one application user interface for the selected Internet application, the Internet application server being operable to access the page definition and metadata in order to generate the at least one application user interface for the first user, the Internet application server being further operable to use the metadata to retrieve the data record for the first user and determine the first functional property for the first user interface element as specified by the first personalization data, the Internet application server being further operable to generate the at least one application user interface using the determined first functional property for the first user interface element for display on the first user display; customized for the first user using metadata for the first application user interface, and the first personalization data;

a data repository including [[a]] the data record for storing the first personalization data, the data record being accessible using the metadata, ~~wherein~~ the data repository ~~comprises~~ comprising a database management server; and

a web server operable to in response to receiving a request from the first user, deliver the at least one application user interface to the first user display, the at least one application user interface delivered to the first user display including the determined first functional property for the first user interface element, and deliver the at least one application user interface to the second user display in response to receiving a request from the second user, the at least one application user interface delivered to the second user display including the determined second functional property for the second user interface element, wherein the first

and second user interface elements are displayable concurrently on the respective first and second user displays with the respective first and second functional properties,

wherein each of the first and second users is able to modify specified interface elements of the at least one application user interface in order to personalize operation of the at least one application user interface in a way that is preferable for each of the first and second users, of the customized first application user interface.

5. (Previously Presented) The system of claim 4, wherein the each of the first functional property and the second functional property includes an interaction model.

6. (Currently Amended) The system of claim 5, wherein the interaction model associated with the first functional property determines the timing of delivery, from the first user display to the web server, of data input on the application user interface and is one of a deferred interaction model or an immediate interaction model, wherein the deferred interaction model is such that data input on the application user interface is deferred for delivery from the first user display to the web server and the immediate interaction model is such that data input on the application user interface is immediately delivered from the first user display to the web server.

Claims 7-14. (Canceled)

15. (Currently Amended) A system for generating a customizable user interface, the system comprising:

an Internet application server operable to support an Internet application;

an application user interface generator operable to generate the customizable user interface of the Internet application for display on a display device of a first user of a plurality of users, the application user interface generator being operable to access a page definition and metadata in order to generate the user interface for each of the plurality of users, the application user interface generator being further operable to use the metadata to retrieve the data record for the first user and determine a first functional property for a first user element of the customizable user interface as specified by personalization data for the first user to generate the customizable

user interface for display on the display device of the first user using the determined first functional property for the first user interface element, generated using personalization data set by the user before execution of the Internet application, wherein the personalization data characterizes at least one functional property of a user interface element of the user interface; the at least one first functional property including an interaction model between the display device and the Internet application server, wherein the interaction model is associated with the timing of delivery, from the display device to the Internet application server, of data input on the user interface;

a personalization system including a personalization engine and a user profile interface, both integrated with the Internet application and operable with an integrated development environment (IDE) so as to enable each of the plurality of users to customize the customizable user interface including one or more user interface elements in conjunction with the Internet application, the IDE comprising graphical features and user interface elements whose properties are defined in metadata which is retrievable via the personalization engine and user profile interface, the personalization engine being operable to access a page definition including the metadata associated with the first functional property, the personalization engine being further operable to store information for the modified first functional property as first personalization data for the first user to the data record associated with the first user and identified by the metadata; and

metadata associated with the at least one functional property of the user interface element; and

a data repository including a data record for storing the personalization data for each of the plurality of users, wherein the data repository comprises a database management server, and wherein each user of the plurality of users is able to modify the personalization data such that the application user interface functions differently for different users,

wherein each of the plurality of users is able to modify specified interface elements of the application user interface in order to personalize operation of the application user interface in a way that is preferable for each of the plurality of users, and

wherein the at least one application user interface including the determined first functional property for the first user interface element is delivered to the first user display in response to receiving a request from the first user, and the at least one application user interface including a determined second functional property for a second user interface element is delivered to the second user display in response to receiving a request from a second user of the plurality of users, the first and second user interface elements being displayable concurrently on the respective first and second user displays with the respective first and second functional properties.

16. (Previously Presented) The system of claim 15, wherein the user interface is configured for display on the display device using standard web browser protocols.

17. (Previously Presented) The system of claim 15, wherein the user interface is further configured for display on the display device using features of a web browser, the features not requiring a browser add-on, plug-in, or extension.

18. (Canceled)

19. (Previously Presented) The system of claim 15, further including a configuration system configured to modify the data record.

20. (Previously Presented) The system of claim 19, wherein the configuration system is included in the Internet application.

21. (Currently Amended) An Internet application system having processor readable storage devices and processor readable code embedded therein for executing instructions on a computer system, comprising:

a user interface generator configured to generate an application user interface, the application user interface being compatible with a standard web browser and being generated in response to a request from a client device of a first user of a plurality of users, ~~the user interface generator utilizing personalization data to generate the application user interface~~ the user interface generator being operable to access a page definition and metadata in order to generate

the application user interface for each of the plurality of users, the user interface generator being further operable to use the metadata to retrieve the data record for the first user and determine a first functional property for a first user element of the customizable user interface as specified by personalization data for the first user to generate the customizable user interface for display on the display device of the first user using the determined first functional property for the first user interface element;

a web application server configured to deliver the application user interface to the client device of each user; and

an Internet application accessible to the user through the generated application user interface; and

a personalization system including a personalization engine and a user profile interface, both integrated with the Internet application and operable with an integrated development environment (IDE) so as to enable each of the plurality of users to customize the customizable user interface including one or more user interface elements in conjunction with the Internet application, the IDE comprising graphical features and user interface elements whose properties are defined in metadata which is retrievable via the personalization engine and user profile interface, the personalization engine being operable to access a page definition including the metadata associated with the first functional property, the personalization engine being further operable to store information for the modified first functional property as first personalization data for the first user to the data record associated with the first user and identified by the metadata,

wherein the user is able to modify the personalization data before execution of the Internet application, each of the plurality of users able to modify specified interface elements of the application user interface in order to personalize operation of the application user interface in a way that is preferable for each of the plurality of users, the personalization data characterizing at least one functional property of the user interface, the at least one first functional property including an interaction model between the client device and the Internet application system, wherein the interaction model is associated with the timing of delivery, from the client device to the Internet application server, of data input on the application user interface, such that the

application user interface that includes the user interface with the interaction model based on the setting of the personalization data by the user before execution of the Internet application functions differently for different users, and

wherein the application user interface including the first functional property for the first user interface element is delivered to the first user display in response to receiving a request from the first user, and the application user interface including a second functional property for a second user interface element is delivered to a second user display in response to receiving a request from a second user of the plurality of users, the first and second user interface elements being displayable concurrently on the respective first and second user displays with the respective first and second functional properties.

Claims 22-26. (Canceled)

27. (Currently Amended) The Internet application system of claim 21, wherein the at least one functional property determining the interaction model between the client device and the Internet application system allows selection from a deferred interaction and immediate interaction model, wherein the deferred interaction model is such that data input on the application user interface is deferred for delivery from the client device to the Internet application system and the immediate interaction model is such that data input on the application user interface is immediately delivered from the client device to the Internet application system, and wherein the selection from the deferred interaction and the immediate interaction model is made by the user before execution of the Internet application.

28. (Previously Presented) The Internet application system of claim 21, wherein the client device is wireless system.

Claims 29-37. (Canceled)

38. (Currently Amended) A method of developing [[an]] a user-customizable application user interface associated with an Internet application, the method comprising the steps of:

selecting an interaction model characterized by a data record, the data record being stored in a data repository and being modifiable by [[a]] each user of a plurality of users before execution of the Internet application, thereby allowing [[the]] each user to modify at least one functional property of at least one user interface element [[in]] of the application user interface before execution of the Internet Application, the data repository being physically remote from a client device of the user used to display the application user interface, the properties of the at least one user interface element being defined in metadata which is retrievable via a personalization engine and user profile interface integrated with the Internet application and operable with an integrated development environment (IDE), the IDE comprising graphical features and user interface elements whose properties are defined in metadata which is retrievable by the personalization engine and user profile interface, the personalization engine being further operable to store information for the modified at least one functional property as personalization data for each user to the data record identified by the metadata;

generating the application user interface for the user using the selected interaction model and the data record wherein the selection is made by the user before execution of the Internet application;

receiving a request from a first user of the plurality of users;

using the metadata to locate the data record including first personalization data for the first user, the first personalization data including a first functional property for a first user interface element as specified by the first user via the personalization system;

generating an application user interface for the first user using the determined first functional property for the first user interface element for display on a first user display; and

delivering the application user interface to the first user display,

generating metadata associated with the interaction model, the metadata including a reference to the data record; and

storing the metadata in association with the Internet application, the Internet application being configured for access using the application user interface;

wherein each user of the plurality of users is able to modify the data record before execution of the Internet application such that the application user interface functions differently for different users, and

wherein the application user interface including the determined first functional property for the first user interface element is delivered to the first user display in response to receiving a request from the first user, and the application user interface including a second functional property for a second user interface element is delivered to a second user display in response to receiving a request from a second user of the plurality of users, the first and second user interface elements being displayable concurrently on the respective first and second user displays with the respective first and second functional properties.

39. (Previously Presented) The method of claim 38, wherein the application user interface includes an interaction model control command.

40. (Previously Presented) The method of claim 38, wherein the interaction model is associated with the timing of delivery, from the client device to the Internet application server, of data input on the application user interface and wherein the interaction model includes one of an immediate mode or deferred mode of communication between the client device and the Internet application server, wherein the immediate mode is such that data input by the user on the application user interface is immediately delivered from the client device to the Internet application server and the deferred mode is such that data input on the application user interface is deferred for delivery from the client device to the Internet application server.

Claims 41-59. (Canceled)

60. (Currently Amended) A computer implemented method of executing an Internet application, comprising the steps of:

receiving a request, from a client device of a first user of a plurality of users, for an application user interface, the application user interface including at least one user interface element;

accessing a page definition, the page definition including metadata associated with the application user interface;

retrieving, using the metadata, a value characterizing an interaction model associated with the user interface, the value being stored in a data repository physically remote from the client device of the first user, the value further being specified by the first user before execution of the Internet application in order to modify interaction functionality of the application user interface, wherein the interaction model is associated with the timing of delivery, from the client device to the Internet application, of data input on the application user interface, the properties of at least one user interface element being defined in metadata which is retrievable via a personalization engine and user profile interface integrated with the Internet application and operable with an integrated development environment (IDE), the IDE comprising graphical features and user interface elements whose properties are defined in metadata which is retrievable by the personalization engine and user profile interface, the personalization engine being further operable to store information for the modified at least one functional property as personalization data for each user to a data record identified by the metadata;

generating HTML responsive to the retrieved value, the value specifying at least a first functional property for a first user interface element as specified by the first user via the personalization system;

including the generated HTML in the application user interface; and

delivering the application user interface to the client device of the user, the application user interface being an interface between the user and the Internet application,

wherein each user of the plurality of users is able to modify, before execution of the Internet application, the value in the data repository characterizing the interaction model such that the application user interface functions differently for different users, and

wherein the application user interface including the first functional property for the first user interface element is delivered to the first user display in response to receiving a request from the first user, and the at least one application user interface including a second functional property for a second user interface element is delivered to a second user display in response to receiving a request from a second user of the plurality of users, the first and second

user interface elements being displayable concurrently on the respective first and second user displays with the respective first and second functional properties.

61. (Previously Presented) The method of claim 60, wherein the retrieved value characterizing the interaction model corresponds to one of a deferred or immediate mode of the interaction model for communication between the client device and the Internet application wherein the deferred mode is such that data input on the application user interface is deferred for delivery from the client device to the Internet application and the immediate mode is such that data input by the user on the application user interface is immediately delivered from the client device to the Internet application.

62. (Canceled)

63. (Previously Presented) The method of claim 60, further including displaying the application user interface at the client device using standard web browser protocols.

Claims 64-77. (Canceled)

78. (Previously Presented) The system of claim 4, wherein each of the first user interface element and the second user interface element is one of text, graphics, images, fields or buttons.

79. (Previously Presented) The system of claim 4, wherein each of the first functional property of the first user interface element and second functional property of the second user interface element includes one of keystroke functionality or functionality of the display buttons.

80. (Canceled)

81. (Previously Presented) The system of claim 4, wherein the application user interface is presented to the first user on the first user display in a first presentation step and

in a second presentation step, wherein the application user interface presented in the second presentation step is modified based on the first personalization data.

82. (Canceled)

83. (Previously Presented) The system of claim 15, wherein the interaction model is one of a deferred mode or immediate mode of communication between the client device and the Internet application server wherein, the deferred mode is such that data input on the user interface is deferred for delivery from the client device to the Internet application server and the immediate mode is such that data input on the user interface is immediately delivered from the client device to the Internet application server.

84. (Canceled)

85. (Previously Presented) The method of claim 38, wherein a user profile interface delivered to the user on the client device enables the user to modify the data record before execution of the Internet application.

86. (Previously Presented) The method of claim 60, wherein a user profile interface delivered to the user on the client device enables the user to modify, before execution of the Internet application, the value in the data repository characterizing the interaction model.

87. (Currently Amended) A system for generating application user interfaces enabling customization of the user interfaces for each of a plurality of users, the system comprising:

a personalization system including a personalization engine and a user profile interface, both integrated with at least one Internet application and operable with an integrated development environment (IDE) so as to enable a first or second user among the plurality of users to customize an application user interface including one or more user interface elements in conjunction with the at least one Internet application, the IDE comprising graphical features and user interface elements whose properties are defined in metadata which is retrievable via the personalization engine and user profile interface, the user profile interface being delivered to

~~each of a first user display of a first user of the plurality of users and to a second user display of a second user of the plurality of users, the personalization engine being operable to access a page definition including metadata associated with at least one customizable functional property of a user interface element on an application user interface and receive through the user profile interface being operable to allow a request from the first user to modify a first personalization data for the first user and the second user to modify a second personalization data for the second user, wherein the first personalization data characterizes a first functional property of a first user interface element of the application user interface to be presented on the first user display, the personalization engine being further operable to store information for the modified first functional property as first personalization data for the first user to a data record associated with the first user and identified by the metadata, the personalization engine being further operable to receive a request from the second user to modify and the second personalization data characterizes a second functional property of a second user interface element of the application user interface to be presented on the second user display, the personalization engine being further operable to store information for the modified second functional property as second personalization data for the second user to a data record associated with the second user and identified by the metadata, the first user interface element and the second user interface element appearing substantially similar on their respective displays but differing in one or more settings of the first personalization data and the second personalization data such that the first functional property and the second functional property are different, resulting in the first user interaction with the first user interface element being different from the second user interaction with the second user interface element;~~

an Internet application server operable to execute at least one selected Internet application of a plurality of Internet applications, the Internet application server including a user interface generator operable to generate at least one application user interface for the selected Internet application, the Internet application server being operable to access the page definition and metadata in order to generate the at least one application user interface for the first user, the Internet application server operable to use the metadata to retrieve the data record for the first user and determine the first functional property for the first user interface element as specified by

~~the first personalization data; customized for each of the first user and the second user using metadata for the at least one application user interface, and the first personalization data and the second personalization data respectively;~~

a data repository including a first data record for storing the first personalization data and a second data record for storing the second personalization data, the first and second data record being accessible using the metadata, wherein the data repository comprises a database management server; and

a web server operable to, in response to receiving a request from the first user, deliver the at least one application user interface including the determined first functional property for the first user interface element to the first user display, and deliver the at least one application user interface including the determined second functional property for the second user interface element to the second user display in response to receiving a request from the second user, each of the first and second users able to modify specified interface elements of the at least one application user interface in order to personalize operation of the at least one application user interface for each of the first and second users, ~~the application user interface, as customized by the first user, including the first user interface element and deliver to the second user display the application user interface, as customized by the second user, including the second user interface element.~~

wherein the application user interface including the first functional property for the first user interface element is delivered to the first user display in response to receiving a request from the first user, and the at least one application user interface including the second functional property for the second user interface element is delivered to the second user display in response to receiving a request from the second user, the first and second user interface elements being displayable concurrently on the respective first and second user displays with the respective first and second functional properties

REMARKS/ARGUMENTS

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-472-5000.

Respectfully submitted,

Jason D. Lohr Reg. 48,163
for Kim Kanzaki Reg. 37,652
Senior Patent Counsel, Oracle Corporation

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 925-472-5000
Fax: 415-576-0300
Attachment
JDL:slh
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